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D K1994001
EXAMINER

BANANEHAAH, M

ART UNIT PAPER NUMBER

5

2316

DATE MAILED:

10/17/95

due 11/17/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined Responsive to communication filed on Jul 20, 95 This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. Notice of References Cited by Examiner, PTO-892.
2. Notice of Draftsman's Patent Drawing Review, PTO-948.
3. Notice of Art Cited by Applicant, PTO-1449.
4. Notice of Informal Patent Application, PTO-152.
5. Information on How to Effect Drawing Changes, PTO-1474.
6.

Part II SUMMARY OF ACTION

1. Claims 1 - 14 are pending in the application.

Of the above, claims 5 are withdrawn from consideration.

2. Claims _____ have been cancelled.

3. Claims _____ are allowed.

4. Claims 1 - 4, 6 - 14 are rejected.

5. Claims _____ are objected to.

6. Claims _____ are subject to restriction or election requirement.

7. This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. Formal drawings are required in response to this Office action.

9. The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are acceptable; not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been approved by the examiner; disapproved by the examiner (see explanation).

11. The proposed drawing correction, filed _____, has been approved; disapproved (see explanation).

12. Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has been received not been received been filed in parent application, serial no. _____; filed on _____.

13. Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. Other

1. This final action is in response to paper number 4, amendment A, which was received Jul. 20, 1995. Applicant's argument have been fully considered but they are not deemed to be persuasive. Claims 1-4, and 6-14 are presented for examination.
2. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior Office action.
3. Claims 1-4, and 6-14 are rejected under 35 U.S.C. § 103 as being unpatentable over Jackson (U.S.Pat. No. 5,297,274) in view of Anschuetz et al. (U.S.Pat. No. 5,305,455).

Jackson disclose a method in a computer system in which a first thread and a second thread of a user application execute **concurrently** (Title: concurrently running thread) in common address space, the method of processing an **application event**, col. 1 lines 26-27, and col. 3 line 29, in response to the detection of said application event, col. 4 line 15, by said first thread, comprising the steps of:

sending a quiesce event, col. 3 lines 38-44, from said first thread to said second thread in response to the detection of said application event by said first thread to cause said second thread to quiesce;

suspending execution, col. 3 lines 45-49, of said first application until said second application has quiesced in response to the quiesce event sent to that application; and

resuming execution, col. 5 line 54, and col. 6 line 40, of said first application to process said application event when said second application has quiesced in response to the quiesce event sent to that application.

Jackson does not explicitly teach of suspending execution of said first thread but he suspend the execution of the application. Anschuetz et al. in the same field of endeavor teach of a data processing system which is operable in a multitasking mode which include at least one process having a plurality of threads. In this system a process can have more than one thread and the process exception (**termination and suspension**) is delivered to each thread of the process that is terminating and/or suspending, col. 2 lines 47-50, in order for the whole process not to be terminated or suspended and **notifying individual threads** and allowing them a chance to be terminated or suspended gracefully, col. 2 lines 56-63.

Therefore it would have been obvious for one ordinary skill in the art of data processing to combine the teaching of Jackson with the "per thread exception management for multitasking multithreaded operating system" of Anschuetz et al, for the purpose of the whole process not to be suspended and **notifying**

individual threads and allowing them a chance to terminate gracefully.

4. Applicant, on page 7 of his Remarks, argue that "there is no teaching of suspending execution of a first thread until a second thread has quiesced in response a quiesce event sent to that thread, nor of resuming execution of the first thread to process an application event when the second thread has suspended in response to the suspension event sent to that thread, as recited in claims 1 and 12 as amended". In response thereto, applicant's attention is respectfully directed to the detail rejection of claims under USC 103, section 3 of this office action where it is indicated that Jackson suspend and resume application and it is Anschuetz who does exception handling (termination and suspension) per thread basis and the reason for combining the two reference is that the whole process not to be terminated and/or suspended and notifying individual threads and allowing them a chance to terminate or suspend gracefully.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See PTO 892 for pertinent references.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE (1) The application has been amended as follows:
ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Majid A. Banankhah whose telephone number is (703) 308-6903.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Majid Banankhah
October 15, 1995



KEVIN A. KRIESS
PRIMARY EXAMINER
GROUP 2300